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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/990,207

11/20/2001

Pawel Drabarek

10191/2066

3531

26646

7590

04/10/2003

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EXAMINER

LYONS, MICHAEL A

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 04/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/990,207

Applicant(s)

DRABAREK, PAWEL

Examiner

Michael A. Lyons

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Specification***

The disclosure is objected to because of the following informalities:

Numerous grammatical errors are present throughout the specification. In addition, on page 4, line 10, there is no reference numeral "3" denoting the demodulation interferometer. On page 5, the reference number for the modulator listed as "3.1" should be "3.2". In the last paragraph on page 5, multiple reference numbers are in error. For example, in line 24, the delay element labeled as "1" should be labeled "3.1".

Appropriate correction is required.

### ***Claim Objections***

Claim 2 objected to because of the following informalities: there should be no comma between the words "spaces" and "of" in line 3 of the claim. Appropriate correction is required.

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claim 12 (the second claim 12) been renumbered 13.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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**Claims 4 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. It is extremely difficult to understand which limitations, or groups of limitations, are specifically being claimed or grouped together in claims 4 and 5.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1-4 and 6-8 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Tearney et al (6,134,003).**

Regarding claim 1, Tearney (Figs. 4 and 6) discloses an interferometric measuring device comprising a probe part 34, an optical fiber 44, and measuring head 54, where the optical fiber, using a lens and a mirror, illuminates a point and pick up light from that point to perform measurements.

As for claim 2, the probe is used to measure inside object 14.

As for claim 3, the fiber illuminates a point via lens 56 and mirror 58 to perform the measurements.

As for claim 4, the probe and fiber contain lens 56.

As for claim 6, the fiber is a single mode fiber (Col. 8, lines 13-14).

As for claims 7 and 8, Tearney discloses a short coherence interferometer (Fig. 4).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 5, 9-10, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tearney et al (6,134,003).**

As for claim 5, applying a drop of adhesive to a fiber to achieve beam shaping or beam guidance is well known.

As for claims 9 and 10, Tearney discloses fiber 44 inside the probe part. A fiber coupler 106 is also disclosed as an interface between a measuring fiber and a reference fiber. This fiber interface is not inside the probe; however, the coupler does split a light beam into a transmitted and reference beams as claimed. The location of the coupler is a matter of design choice.

As for claim 13, the optical probe has the ability to rotate.

**Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tearney et al (6,134,003) in view of Drabarek et al (6,490,046).**

As for claims 11 and 12, while Tearney discloses a white light interferometer, the interferometer is not a demodulation interferometer. Drabarek (Fig. 1), however, discloses an identical demodulation interferometer 1, in a device containing a measuring light probe, as the

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claimed interferometer (element 3 in the application). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a demodulation interferometer with the probe of Tearney as per Drabarek to provide the desired light interference.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Pat. 6,008,898 to Furstenau et al, a method and apparatus for measuring acceleration and vibration using freely suspended fiber sensor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Lyons whose telephone number is 703-305-1933. The examiner can normally be reached on Monday thru Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G Font can be reached on 703-308-4877. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-0725 for regular communications and 703-308-0725 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0935.

MAL  
April 2, 2003



**Samuel A. Turner**  
Primary Examiner